U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NORTH CAROLINA SECTION.

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VOL. XXI. RALEIGH, N. C., JULY, 1916. No. 7.

## GENERAL SUMMARY.

The outstanding feature of the month was the unprecedented rainfall and destructive floods in the upper Yadkin, Catawba, French Broad and New rivers, details of which are given in a special article on page 55. Previous records of excessive and total monthly rainfall were broken at many stations by a large margin. With the exception of a few days the month as a whole was cloudy and sultry with high relative humidity. Owing to the cloudiness the day temperatures were rather low, and the absolute range in temperature was less than any previous record for the State in July. Rains occurred nearly every day in the western portion and through the greater part of the month in the central portion; scattered showers fell in the eastern portion during the first two weeks, followed during the latter part of the month by some heavy rains, sufficient to cause a moderate rise in the eastern rivers though with no considerable overflow except in the Neuse, lower Cape Fear and the upper tributaries of Lumber River where growing crops were damaged to some extent.

All crops made fair to good progress in the eastern counties, but too much rain and insufficient sunshine over most of the cotton growing area hindered cultivation and satisfactory development. There were also complaints of too much rain for portions of the tobacco crop; curing was in progress in the eastern portion at the close of the month. Corn and all other crops made good progress aside from serious damage in flooded areas.

## PRESSURE.

The mean sea level atmospheric pressure for the Section, determined from 6 stations, was 30.02 inches. The highest mean was 30.03 at Hatteras and Wilmington and the lowest 29.99 at Asheville. The highest barometer reading during the month was 30.27 at Asheville on the 30th and the lowest 29.68 at Hatteras on the 19th.

## TEMPERATURE.

The monthly mean temperature for the State, as shown by the records of 63 stations, was 76.0°, or 0.9° below normal for 48 stations having ten or more years' record. Temperature averaged slightly below normal at most stations, the deficiency being 0.9° in the eastern, 1.3° in the central, and 0.6° in the western portion of the Section. The absolute range was the least of record in July. Day temperatures were not as high as usual but there were several sultry periods, due to excessive moisture and cloudiness. The highest temperature was 98° at Greenville on the 18th and Lumberton on the 30th; lowest, 48° at Banners Elk on the 5th. The highest monthly mean was 80° at Beaufort, Carteret County; lowest 64.3° at Eagles Nest, Haywood County.

## HUMIDITY.

The average relative humidity, based on records at 6 stations, was 86 per cent at 8 a.m. and 80 per cent at 8 p.m. being considerably above normal. The highest percentage was observed at Asheville, and the lowest at Raleigh.

## PRECIPITATION.

Charts and details of the extraordinary rainfall in the Blue Ridge Mountains and foothills will be found elsewhere in this number. Previous records of 24-hour and total monthly amounts were broken by a wide margin, and the rainfall at Altapass of 22.22 inches between 2 p.m. of the 15th and 2 p.m. of the 16th appears to be the greatest of record in the United States for 24 hours.

The average rainfall for the State, 76 stations reporting, was 11.08 inches, the mean departure from the normal of 55 stations having ten or more years' record being +5.26 inches. While this is more than double the normal for the State as a whole many of the eastern stations received only about the normal amount and some less than the July average. The greatest monthly amount was 37.40 inches at Gorge, Caldwell County; least, 4.69 at Belhaven, Hyde County. Average by districts: Western, 17.34 inches, or 11.81 above normal; Central, 9.63 inches, or 4.66 above; Eastern, 7.71 inches or 1.51 inches above normal.

## WIND.

The prevailing direction of the wind was from the southwest; in the eastern from south, central district from the southwest, and in the western district from the west. The average hourly velocities were as follows: Asheville, 6.9 miles; Charlotte, 9.4; Hatteras, 13.9; Raleigh, 7.2; and Wilmington, 7.3. Maximum velocities (for five minutes): Asheville 36 miles an hour from the east on the 26th; Charlotte, 60 east, 14th; Hatteras, 50, north, 19th; Raleigh, 31, southwest, 24; Wilmington, 26, east, 14th.

## SUNSHINE AND CLOUDINESS.

Sunshine averaged 52 per cent of the possible amount, being decidedly below normal. The highest percentage was 60 at Charlotte; lowest 31 at Asheville. There were 8 clear, 12 partly cloudy, and 11 cloudy days.

## MISCELLANEOUS PHENOMENA.

*Gales (dates).*—Charlotte, 14; Hatteras, 19 and 20; Settle, 15; Swan Quarter, 16 and 17.

*Halos (dates).*—*Solar:* Asheville, 7; Raleigh, 2.

*Hail (dates).*—Brewers, 23.

## CORRECTION.

Mean temperature for June, 1916, for Greenville, should be 73.8 instead of 74.0; departure −3.4 instead of −3.2.

## COMPARATIVE DATA FOR JULY.

| Year. | Temperature. | | | Average precipitation. | Number of days. | | | | Prevailing wind. |
|---|---|---|---|---|---|---|---|---|---|
| | Mean. | Highest. | Lowest. | | Rainy (.01 or more). | Clear. | Partly cloudy. | Cloudy. | |
| 1887 | 80.3 | 107 | 56 | 6.13 | 13 | 8 | 14 | 9 | sw. |
| 1888 | 77.7 | 102 | 52 | 3.26 | 9 | 10 | 14 | 7 | ne. |
| 1889 | 77.1 | 100 | 51 | 7.73 | 15 | 8 | 10 | 13 | sw. |
| 1890 | 76.2 | 100 | 47 | 7.19 | 12 | 11 | 10 | 10 | sw. |
| 1891 | 74.2 | 97 | 42 | 6.75 | 14 | 9 | 10 | 12 | sw. |
| 1892 | 76.0 | 103 | 48 | 5.73 | 13 | 11 | 12 | 8 | sw. |
| 1893 | 78.4 | 104 | 52 | 4.01 | 9 | 14 | 12 | 5 | sw. |
| 1894 | 76.2 | 99 | 42 | 6.07 | 12 | 11 | 11 | 9 | sw. |
| 1895 | 75.2 | 99 | 43 | 5.25 | 11 | 11 | 12 | 8 | sw. |
| 1896 | 77.4 | 103 | 44 | 8.19 | 14 | 10 | 11 | 10 | sw. |
| 1897 | 77.2 | 103 | 45 | 5.60 | 12 | 12 | 11 | 8 | sw. |
| 1898 | 77.7 | 103 | 49 | 6.98 | 14 | 9 | 12 | 10 | sw. |
| 1899 | 76.5 | 102 | 40 | 6.51 | 12 | 13 | 9 | 9 | sw. |
| 1900 | 79.2 | 107 | 44 | 4.04 | 9 | 14 | 11 | 6 | sw. |
| 1901 | 78.8 | 105 | 49 | 6.59 | 10 | 14 | 9 | 8 | sw. |
| 1902 | 78.6 | 107 | 44 | 2.74 | 8 | 15 | 11 | 5 | ne. |
| 1903 | 78.1 | 102 | 41 | 3.79 | 7 | 18 | 9 | 4 | sw. |
| 1904 | 75.9 | 103 | 40 | 5.41 | 12 | 12 | 12 | 7 | sw. |
| 1905 | 77.3 | 105 | 45 | 7.80 | 14 | 12 | 11 | 8 | sw. |
| 1906 | 75.6 | 100 | 46 | 9.23 | 16 | 7 | 13 | 11 | sw. |
| 1907 | 78.5 | 102 | 45 | 4.73 | 10 | 15 | 10 | 6 | sw. |
| 1908 | 77.2 | 100 | 45 | 8.13 | 13 | 12 | 11 | 8 | ne. |
| 1909 | 75.9 | 97 | 38 | 5.72 | 11 | 17 | 7 | 7 | sw. |
| 1910 | 77.2 | 99 | 46 | 5.07 | 13 | 12 | 12 | 7 | sw. |
| 1911 | 76.7 | 104 | 38 | 3.43 | 9 | 15 | 12 | 4 | sw. |
| 1912 | 75.8 | 99 | 46 | 4.57 | 10 | 11 | 14 | 6 | sw. |
| 1913 | 78.2 | 106 | 40 | 4.75 | 10 | 15 | 11 | 5 | sw. |
| 1914 | 76.7 | 106 | 41 | 4.71 | 10 | 16 | 11 | 4 | sw. |
| 1915 | 77.6 | 103 | 42 | 4.36 | 10 | 16 | 10 | 5 | sw. |
| 1916 | 76.0 | 98 | 48 | 11.08 | 15 | 8 | 12 | 11 | sw. |

## Climatological Data for July, 1916.

| Stations. | Counties. | Elevation, feet. | Length of record, years. | Temperature, in degrees Fahr. | | | | | | | Precipitation, in inches. | | | | Number of days. | | | | Prevailing direction of wind. | Observers. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Mean. | Departure from the normal. | Highest. | Date. | Lowest. | Date. | Greatest daily range. | Total. | Departure from the normal. | Greatest in 24 hours. | Total snowfall, unmelted. | With precipit'on (0.01 in. or more) | Clear. | Partly cloudy. | Cloudy. | | |
| *Eastern District.* | | | | | | | | | | | | | | | | | | | | |
| Beaufort | Carteret | 10 | 15 | 80.0 | 0.0 | 91 | 20 | 64 | 7 | 23 | 5.49 | +0.85 | 3.70 | 0 | 10 | 18 | 5 | 8 | sw. | U. S. Fisheries Laboratory. |
| Belhaven | Beaufort | 4 | 7 | 78.0 | ..... | 91 | 19 | 64 | 7 | 25 | 4.69 | ..... | 1.50 | 0 | 7 | ..... | ..... | ..... | s. | *Dr. A. L. Bell.* |
| Bolton | Columbus | 61 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | Rex M. Allen. |
| Eagletown ‡‡ | Northampton | 66 | 11 | 77.4 | −0.3 | 91 | † 13 | 58 | 6 | 24 | 8 70 | +2.64 | 2.10 | 0 | 11 | 13 | 15 | 3 | sw. | J. T. Elliott. |
| Edenton | Chowan | 30 | 22 | [b]78.5 | −0.9 | [b]93 | † 11 | [b]58 | †6 | [b]30 | 5.50 | −1.14 | 2.25 | 0 | 7 | ..... | ..... | ..... | s. | E. R. Conger. |
| Elizabeth City | Pasquotank | 8 | 4 | 77.2 | ..... | 93 | 11 | 56 | 6 | 31 | 6.72 | ..... | 2.00 | 0 | 11 | 16 | 6 | 9 | sw. | W. J. Simmons. |
| Elizabethtown | Bladen | 60 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 14.38 | ..... | 2.00 | 0 | 13 | ..... | ..... | ..... | ..... | H. H. Barnhill. |
| Enfield (near) | Halifax | 99 | 5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 7.67 | ..... | 1.72 | 0 | 9 | ..... | ..... | ..... | ..... | T. S. Inborden. |
| Fayetteville | Cumberland | 170 | 28 | 77.8 | −1.4 | 93 | 11 | 61 | 6 | 25 | 7.78 | +1.22 | 1.53 | 0 | 17 | 12 | 5 | 14 | s. | Frank Glover. |
| Goldsboro | Wayne | 102 | 46 | 78.8 | −0.8 | 94 | † 3 | 61 | 6 | 27 | 6.95 | +0.51 | 1.53 | 0 | 15 | 17 | 2 | 12 | s. | Mrs. J. J. Robinson. |
| Greenville | Pitt | 75 | 21 | 78.3 | −1.4 | 98 | 18 | 58 | 6 | 31 | 8.80 | +2.16 | 1.79 | 0 | 18 | 11 | 9 | 11 | se. | Mrs. Maacca Hearne. |
| Hatteras | Dare | 11 | 42 | 77.7 | −0.9 | 86 | 20 | 63 | 7 | 20 | 4.93 | −1.20 | 1.62 | 0 | 13 | 5 | 13 | 8 | s. | U. S. Weather Bureau. |
| Kinston | Lenoir | 46 | 18 | 78.5 | −1.8 | 96 | 20 | 60 | † 6 | 28 | 7.06 | +0.40 | 1.85 | 0 | 12 | 3 | 15 | 13 | s. | H. C. V. Peebles. |
| Lumberton | Robeson | 102 | 33 | 79.0 | −1.2 | 98 | 30 | 61 | 6 | 31 | 14.16 | +8.67 | 5.00 | 0 | 17 | 3 | 18 | 10 | se. | B. M. Davis. |
| Manteo | Dare | 12 | 11 | 75.5 | −2.7 | 89 | 3 | 55 | 7 | 29 | 6.92 | +0.58 | 1.40 | 0 | 10 | 16 | 4 | 11 | sw. | U. S. Weather Bureau. |
| Nashville | Nash | 190 | 12 | 77.8 | −0.8 | 93 | †19 | 59 | 6 | 30 | 6.26 | −0.07 | 1.95 | 0 | 10 | 3 | 13 | 15 | sw. | J. B. Boddie. |
| Newbern | Craven | 12 | 34 | 78.8 | −0.2 | 94 | 17 | 61 | 7 | 27 | 8.14 | +0.74 | 2.35 | 0 | 18 | 8 | 11 | 12 | se. | Jas. B. Hill. |
| Rocky Mount | Nash | 105 | 5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5.89 | ..... | 1.87 | 0 | 11 | ..... | ..... | ..... | ..... | J. W. Bartholomew. |
| Scotland Neck | Halifax | 80 | 12 | 78.0 | +0.8 | 88 | †11 | 63 | 6 | 19 | 7.51 | +2.13 | 2.15 | 0 | 10 | 16 | 5 | 10 | s. | J. Y. Savage. |
| Sloan | Duplin | 50 | 23 | 77.4 | −1.3 | 97 | 27 | 58 | 6 | 29 | 8.65 | +1.65 | 1.50 | 0 | 16 | 13 | 9 | 9 | s. | D. M. Sholar. |
| Smithfield | Johnston | 146 | 26 | 78.8 | −0.7 | 97 | 18 | 61 | 6 | 27 | 12.06 | +5.59 | 2.19 | 0 | 13 | 12 | 10 | 9 | e. | Edwin S. Sanders. |
| Southport | Brunswick | 18 | 61 | 79.3 | −1.1 | 91 | †19 | 68 | †1 | 19 | 5.05 | −1.25 | 2.16 | 0 | 8 | 9 | 13 | 9 | sw. | Mrs. C. E. Taylor. |
| Swan Quarter | Hyde | 2 | 2 | 77.4 | ..... | 90 | †16 | 55 | 7 | 29 | 5.11 | ..... | 1.97 | 0 | 14 | 8 | 11 | 12 | sw. | A. N. Froom. |
| Tarboro | Edgecombe | 50 | 31 | 79.3 | −0.6 | 96 | †12 | 58 | 5 | 31 | 5.98 | −0.22 | 3.45 | 0 | 13 | 15 | 7 | 9 | s. | E. V. Zoeller. |
| Weldon | Halifax | 81 | 44 | 78.6 | −0.7 | 93 | †13 | 59 | 6 | 28 | 6.81 | +1.65 | 1.83 | 0 | 12 | 6 | 11 | 14 | s. | H. D. Allen. |
| Wenona | Washington | 16 | 1 | 75.8 | ..... | 94 | 16 | 51 | 7 | 35 | 7.42 | ..... | 2.00 | 0 | 11 | ..... | ..... | ..... | ..... | State Test Farm. |
| Willard | Pender | 51 | 8 | 77.3 | ..... | 92 | 20 | 60 | 6 | 24 | 8.66 | ..... | 1.82 | 0 | 12 | 17 | 7 | 7 | w. | State Test Farm. |
| Wilmington | New Hanover | 52 | 45 | 78.1 | −0.6 | 92 | 20 | 66 | 6 | 21 | 10.83 | +3.86 | 4 94 | 0 | 14 | 4 | 14 | 13 | s. | U. S. Weather Bureau. |
| District means and extremes | | ..... | .... | 78.1 | −0.9 | 98 | †18 | 51 | 7 | 35 | 7.71 | +1.51 | 5.00 | 0 | 12 | 11 | 10 | 10 | s. | |
| *Central District.* | | | | | | | | | | | | | | | | | | | | |
| Albemarle | Stanly | 700 | 4 | 76.8 | ..... | 92 | † 3 | 57 | 6 | 31 | 10.78 | ..... | 4.70 | 0 | 19 | 6 | 17 | 8 | sw. | M. J. Harris. |
| Caroleen | Rutherford | 806 | 16 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 19.40 | +15.19 | 8.00 | 0 | 20 | 3 | 17 | 11 | sw. | S. B. Tanner. |
| Chapel Hill | Orange | 500 | 58 | 76.1 | −2.6 | 88 | † 2 | 61 | 6 | 23 | 5.74 | −0.86 | 1.82 | 0 | 18 | 9 | 14 | 8 | sw. | V. L. Chrisler. |
| Charlotte | Mecklenburg | 773 | 40 | 76.0 | −2.7 | 89 | 2 | 64 | 9 | 23 | 16.55 | +11.06 | 5.04 | 0 | 16 | 2 | 13 | 16 | s. | U. S. Weather Bureau. |
| Durham (near) | Durham | 406 | 7 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5.36 | +1.25 | 2.48 | 0 | 12 | ..... | ..... | ..... | ..... | J. C. Michie. |
| Graham | Alamance | 656 | 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 6.10 | +1.99 | 1.96 | 0 | 13 | ..... | ..... | ..... | ..... | A. J. Thompson. |
| Greensboro | Guilford | 843 | 35 | 76.8 | −1.2 | 93 | 3 | 59 | 6 | 27 | 8.23 | +3.64 | 1.10 | 0 | 17 | 0 | 12 | 19 | sw. | A. R. Horry. |
| Henderson | Vance | 508 | 23 | 78.0 | 0.0 | 94 | 20 | 62 | 6 | 31 | 6.18 | +0.73 | 2.26 | 0 | 11 | 10 | 16 | 5 | se. | Enoch Powell. |
| Kings Mountain | Cleveland | 952 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | G. T. King. |
| Lillington | Harnett | 200 | 1 | 77.6 | −0.6 | 93 | 20 | 61 | †6 | 27 | 6.86 | +1.09 | 1.50 | 0 | 14 | 10 | 10 | 11 | s. | Henry T. Faucett. |
| Lincolnton | Lincoln | 994 | 14 | 77.0 | +0.4 | 93 | 3 | 60 | 29 | 27 | 18.47 | +13.90 | 10.00 | 0 | 18 | 3 | 20 | 8 | s. | J. Thomas McLean. |
| Louisburg | Franklin | 375 | 25 | 77.4 | −0.8 | 92 | 20 | 60 | †6 | 25 | 5.39 | +0.21 | 2.03 | 0 | 8 | 8 | 20 | 3 | sw. | Rev. W. B. Morton. |
| Moncure | Chatham | 232 | 22 | 77.0 | −1.7 | 93 | 20 | 58 | 6 | 27 | 5.00 | +0.25 | 1.24 | 0 | 13 | 13 | 8 | 10 | se. | B. J. Utley. |
| Monroe | Union | 586 | 22 | 77.0 | −1.1 | 91 | 12 | 58 | 6 | 30 | 12.04 | +7.13 | 4.36 | 0 | 15 | 8 | 10 | 13 | sw. | T. A. Ashcraft. |
| Mount Holly | Gaston | 616 | 19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 11.45 | +5.77 | 2.10 | 0 | 16 | ..... | ..... | ..... | ..... | J. W. Holland. |
| Neuse | Wake | 266 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 7.86 | ..... | 2.24 | 0 | 13 | ..... | ..... | ..... | ..... | Mrs. E. M. Allen. |
| Pinehurst | Moore | 650 | 12 | [a]79.0 | −0.3 | [a]94 | †11 | [a]59 | 6 | [a]30 | 9.41 | +3.29 | 2.25 | 0 | 10 | 12 | 7 | 12 | s. | General Office. |
| Raleigh | Wake | 390 | 45 | 77.0 | −1.5 | 90 | 20 | 64 | 30 | 21 | 8.09 | +1.98 | 3.03 | 0 | 14 | 4 | 13 | 14 | sw. | U. S. Weather Bureau. |
| Randleman | Randolph | 816 | 11 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 6.95 | +2.10 | 1.74 | 0 | 11 | ..... | ..... | ..... | ..... | L. D. Mendenhall. |
| Reidsville | Rockingham | 828 | 17 | 76.6 | −1.0 | 91 | 3 | 58 | 6 | 27 | 5.53 | +1.00 | 0.74 | 0 | 16 | 4 | 15 | 12 | sw. | E. M. Redd. |
| Rockingham | Richmond | 210 | 21 | [a]78.2 | −1.8 | [a]94 | 14 | [a]61 | 6 | [a]28 | 9.98 | +3.96 | 2.60 | 0 | 15 | ..... | ..... | ..... | ..... | H. S. Ledbetter. |
| Rougemont | Durham | 549 | 2 | 76.0 | ..... | 90 | 3 | 55 | 6 | 29 | 5.16 | ..... | 2.50 | 0 | 8 | 15 | 1 | 15 | w. | Mrs. E. H. Williams. |
| Salisbury | Rowan | 760 | 32 | 77.2 | −1.8 | 93 | 3 | 60 | 30 | 29 | 11.16 | +6.55 | 2.47 | 0 | 16 | 5 | 8 | 18 | e. | Miss Thelma Wilkinson. |
| Sanatorium | Hoke | 600 | 2 | 77.4 | ..... | 92 | 11 | 60 | 6 | 29 | 10.59 | ..... | 2.98 | 0 | 13 | 10 | 19 | 2 | s. | State Sanatorium. |
| Settle ‡‡ | Iredell | 700 | 20 | 74.0 | −2.9 | 89 | 28 | 59 | 6 | 24 | 11.05 | +5.48 | 3.80 | 0 | 14 | 8 | 9 | 14 | sw. | C. H. Smith |
| Siler City | Chatham | ..... | .... | [b]76.7 | ..... | '91 | †12 | [b]58 | 6 | '27 | 9.44 | ..... | 2.86 | 0 | 18 | 13 | 8 | 10 | sw. | Junius Wren. |
| Southern Pines | Moore | 519 | 26 | 76.7 | −2.6 | 92 | 12 | 60 | 6 | 26 | 11.92 | +4.82 | 2.25 | 0 | 14 | 10 | 11 | 10 | ..... | Mrs. P. H. Beck. |
| Statesville | Iredell | 950 | 28 | [d]77.6 | +0.5 | 92 | 3 | [b]60 | 5 | [b]29 | 15.46 | +10.65 | 3.52 | 0 | 18 | 4 | 12 | 15 | sw. | D. Matt Thompson. |
| Winston-Salem | Forsyth | 1,000 | 21 | 76.2 | −1.2 | 91 | 28 | 58 | 6 | 29 | 9.39 | +4.29 | 2.63 | 0 | 20 | 13 | 6 | 12 | sw. | Rev. H. E. Rondthaler. |
| District means and extremes | | ..... | .... | 76.9 | −1.3 | 94 | †11 | 55 | 6 | 31 | 9.63 | +4.66 | 10.00 | 0 | 15 | 8 | 12 | 11 | sw. | |
| *Western District.* | | | | | | | | | | | | | | | | | | | | |
| Altapass | McDowell | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 35.40 | ..... | 22.22 | 0 | 23 | 14 | 10 | 7 | s. | John S. Bowen. |
| Andrews | Cherokee | 1,800 | 6 | 74.4 | ..... | 90 | 17 | 58 | 5 | 30 | 8.81 | ..... | 2.60 | 0 | 23 | 3 | 15 | 13 | sw. | G. Wayne Walker. |
| Asheville | Buncombe | 2,255 | 37 | 72.2 | †0.5 | 84 | 1 | 61 | 5 | .21 | 9.28 | +4.42 | 2.38 | 0 | 22 | 2 | 16 | 13 | se. | U. S. Weather Bureau. |
| Banners Elk | Avery | 3,750 | 8 | 66.9 | ..... | 83 | 28 | 48 | 5 | 28 | 24.06 | ..... | 8.66 | 0 | 17 | 8 | 7 | 16 | w. | T. L. Lowe. |
| Brevard | Transylvania | 2,230 | 14 | [e]72.8 | +0.7 | [e]87 | 31 | [e]61 | †5 | [e]25 | 27.26 | +21.04 | ..... | 0 | 22 | ..... | ..... | ..... | ne. | Prof. C. H. Trowbridge. |
| Brewers | Wilkes | 1,450 | 19 | 73.8 | −1.6 | 93 | 28 | 51 | 7 | 38 | 21.15 | +15.88 | 6.68 | 0 | 23 | 2 | 19 | 10 | w. | W. L. Brewer. |
| Bryson City | Swain | 2,000 | 28 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4.78 | −0.65 | 1.60 | 0 | 16 | ..... | ..... | ..... | ..... | D. K. Collins. |
| Cullowhee | Jackson | 2,100 | 6 | 73.8 | ..... | 89 | †3 | 58 | 6 | 27 | 8.09 | ..... | 1.32 | 0 | 22 | 1 | 3 | 27 | s. | Frank H. Brown. |
| Eagle Nest | Haywood | 5,050 | 3 | 64.3 | ..... | 76 | †2 | 53 | 8 | 20 | 8.35 | ..... | 1.40 | 0 | 13 | 5 | 23 | 3 | n. | S. C. Satterthwait. |
| Elkin | Surry | 874 | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10.16 | ..... | 2.15 | 0 | 17 | ..... | ..... | ..... | ..... | Mrs. C. L. Myers. |
| Hendersonville | Henderson | 2,167 | 19 | 71.8 | −0.5 | 85 | †3 | 58 | 6 | 23 | 22.09 | +16.02 | 9.92 | 0 | 23 | 8 | 14 | 9 | sw. | Thos. W. Valentine. |
| Hickory | Catawba | 1,165 | 3 | 74.4 | ..... | 90 | 28 | 62 | 8 | 24 | 19.38 | ..... | 9.88 | 0 | 18 | 5 | 20 | 6 | s. | Frank B. Gwin. |
| Highlands | Macon | 3,850 | 29 | 66.4 | −0.4 | 80 | 31 | 53 | 27 | 23 | 35.49 | +28.18 | 7.43 | 0 | 22 | 2 | 22 | 7 | se. | T. G. Harbison. |
| Hot Springs | Madison | 1,326 | 18 | 76.2 | +1.1 | 92 | 1 | 60 | 5 | 27 | 5.14 | −0.47 | 1.30 | 0 | 12 | 7 | 12 | 12 | e. | P. A. Garner. |
| Jefferson | Ashe | 2,900 | 9 | 68.9 | ..... | 85 | 28 | 50 | 6 | 29 | 21.13 | ..... | 7.35 | 0 | 19 | 0 | 0 | 31 | w. | Prof. E. J. Johnson. |
| Lenoir | Caldwell | 1,186 | 42 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | J. H. Beall. |
| Marion | McDowell | 1,425 | 24 | 73.9 | −1.6 | 89 | †28 | 62 | 27 | 25 | 24.42 | +18.93 | 7.83 | 0 | 24 | 8 | 17 | 6 | w. | Sergt. Thos. McGuire. |
| Marshall | Madison | 1,646 | 16 | [a]74.1 | −0.7 | [a]88 | 1 | [a]61 | 5 | [a]23 | 7.14 | +3.24 | 1.55 | 0 | 14 | 3 | 8 | 20 | w. | M. L. Church. |
| Morganton | Burke | 1,135 | 29 | 75.0 | −1.0 | 90 | †3 | 62 | 8 | 23 | 15.48 | +10.51 | 4.79 | 0 | 21 | 6 | 14 | 11 | se. | J. R. P. Massey. |
| Mount Airy | Surry | 1,048 | 28 | 75.1 | +0.1 | 90 | †28 | 52 | 6 | 35 | 9.85 | +4.31 | 2.95 | 0 | 20 | 8 | 19 | 4 | w. | J. B. Sparger. |
| Murphy | Cherokee | 1,614 | 40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10.28 | +4.20 | 1.49 | 0 | 22 | ..... | ..... | ..... | ..... | Miss Victoria Mingus. |
| Rock House ‡‡ | Macon | 3,100 | 24 | 67.9 | −3.0 | 81 | †28 | 57 | †8 | 20 | 36.44 | +27.91 | 7.34 | 0 | 27 | 0 | 15 | 16 | se. | Barry C. Hawkins. |
| Waynesville | Haywood | 2,792 | 22 | ..... | ..... | [f]82 | †17 | [f]64 | †9 | [f]16 | ..... | ..... | ..... | 0 | ..... | ..... | ..... | ..... | ..... | R. D. Gilmer. |
| District means and extremes | | ..... | .... | 71.9 | −0.6 | 92 | 1 | 48 | 5 | 38 | 17.34 | +11.81 | 22.22 | 0 | 20 | 5 | 14 | 12 | w. | |
| State means and extremes | | ..... | .... | 76.0 | −0.9 | 98 | †18 | 48 | 5 | 38 | 11.68 | +5.26 | 22.22 | 0 | 15 | 8 | 12 | 11 | sw. | |

The departures from the normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means. Reference letters, (a, b, c), appearing in the table indicate number of days missing: For example, b represents two days missing, etc. † Also on other dates. †† Received too late to be included in means and summaries. ‡‡ Post-office addresses of these stations are as follows: Of Chimney Rock, Bat Cave; of Eagletown, Rich Square; of Rock House, Highlands; of Settle, Harmony. T. Precipitation is less than 0.01 inch rain or melted snow.

## Daily Precipitation for July, 1916.

| Stations. | Watershed. | Day of month. 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Eastern District.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Beaufort | Coast | | | .13 | | | | | | | | | | | | | | | .02 | .40 | | .05 | .79 | 3.70 | | .19 | .09 | .03 | | .03 | | | 5.49 |
| Belhaven | Pungo | | | .04 | | | | | | | | | | | | | .25 | .40 | | | | 1.50 | .50 | .60 | 1.40 | | | | | | | | 4.69 |
| Bolton | Waccamaw | | | .22 | | | | | | .48 | .08 | | | T. | T. | | | | | | | | | | | | | | | | | | |
| Edenton | Coast | | | | | | | | T. | T. | | | | | | | | | | .15 | | .47 | 1.45 | 2.10 | .90 | 1.10 | .75 | | 1.00 | | | | 8.70 |
| Elizabeth City | Pasquotank | | | .20 | | | | | | .15 | | | | | | | | T. | | .25 | T. | .30 | .75 | .30 | 2.25 | 1.25 | | T. | .40 | | | | 5.50 |
| Elizabethtown | Cape Fear | | | .40 | | | | | | .25 | .95 | | | 1.10 | 1.25 | | | | | .35 | .60 | .65 | .45 | .70 | 2.00 | .75 | .10 | .77 | | | | | 6.72 |
| Enfield (near) | Tar | 1.02 | | | | | | | | .75 | .27 | | | | .62 | | | | | | | 2.00 | 1.90 | .60 | 1.40 | 1.50 | .72 | | 2.00 | .31 | | | 14.38 |
| Fayetteville | Cape Fear | .19 | | .29 | .16 | | | | T. | .50 | | | | | | | | | | | | | .92 | .22 | 1.72 | .90 | | | | 1.25 | | | 7.67 |
| Goldsboro | Neuse | .78 | | T. | T. | | | | .01 | 1.09 | .02 | | .39 | | .03 | 1.20 | | | | | | .02 | .30 | .58 | 1.53 | .20 | .99 | .54 | .48 | .33 | .05 | | 7.78 |
| Greenville | Tar | .65 | | .05 | .98 | | | | | | .02 | | | | .01 | .52 | | | | T. | | .30 | .67 | 1.53 | .14 | 1.06 | .69 | .01 | .10 | .02 | | | 6.95 |
| Hatteras *** | Coast | | | .01 | .39 | .18 | .04 | | | .02 | .13 | .01 | | | | | .74 | | | T. | .22 | .12 | 1.24 | 1.47 | .24 | 1.79 | .38 | .03 | .09 | .63 | .01 | | 8.80 |
| Kinston | Neuse | | .04 | | | | | | | | .13 | | | | | T. | | | T. | .63 | .20 | .13 | .85 | 1.62 | .35 | .02 | .38 | | | T. | | | 4.93 |
| Lumberton | Lumber | .94 | | 1.37 | | | | | | .05 | .25 | | .02 | | .83 | 5.00 | .10 | | | .07 | | .10 | .95 | 1.15 | 1.80 | 1.85 | .17 | | | .45 | | | 7.06 |
| Manteo | Coast | | | | | | | | | .08 | | | | | .22 | .18 | | | | | | 2.14 | .36 | .40 | 1.06 | .37 | .33 | .15 | T. | .32 | .47 | | 14.16 |
| Nashville | Tar | .41 | T. | | | | | | | .65 | .16 | T. | | | T. | | .10 | | .04 | .74 | .42 | 1.22 | .66 | 1.40 | 1.14 | .48 | .16 | | .66 | | | | 6.92 |
| Newbern | Neuse | | | .02 | .55 | | | | | .05 | .41 | .04 | | .11 | .05 | T. | .04 | | .25 | .41 | .14 | .57 | 2.35 | .07 | 1.39 | .22 | .16 | T. | 1.31 | T. | | | 6.20 |
| Rocky Mount | Tar | .90 | | | | | | | | .20 | .10 | T. | T. | T. | | | | | | | T. | | .79 | 1.68 | .17 | 1.95 | .19 | T. | | .16 | | | 6.26 |
| Scotland Neck | ....do | | | | | | | | | | | | | | | | .42 | | | | T. | | .30 | 1.87 | .42 | .95 | .40 | .05 | | .28 | T. | | 8.14 |
| Sloan | Cape Fear | | .20 | | .27 | | | | | .87 | | | | | .20 | | | | | | | | .30 | .95 | .70 | .50 | 2.15 | .30 | | | | | 5.89 |
| Smithfield | Neuse | .62 | | .09 | .40 | | | | | T. | .17 | .04 | | 1.27 | | .05 | | T. | | .09 | | 1.50 | 1.00 | .76 | 1.14 | .56 | 1.02 | .04 | .44 | .10 | | | 7.51 |
| Southport | Cape Fear | | | | .85 | .10 | | | | .60 | | | | | | .67 | | | | | | .47 | 2.19 | 2.06 | 1.00 | 1.20 | 1.07 | .19 | | 1.50 | | | 8.65 |
| Swan Quarter | Coast | .01 | | | .38 | | T. | | | | | | | | .68 | | | | | T. | | | .06 | 2.16 | T. | .21 | .22 | | | | | | 12.06 |
| Tarboro | Tar | | | | T. | | | | | | | | | | | | | | .04 | .33 | .09 | .45 | .87 | 1.97 | .49 | .07 | .31 | .01 | .04 | .05 | | | 5.05 |
| Weldon | Roanoke | 1.22 | | | .55 | | | | T. | .21 | | .16 | | | .16 | .08 | | | | | .03 | .11 | .32 | 3.45 | .06 | .81 | .24 | .06 | .29 | | | | 5.11 |
| Wenona | Coast | | | | .30 | | | | | | .10 | .12 | | | T. | .07 | .03 | .01 | | T. | | T. | | 1.13 | .19 | 1.83 | .66 | | | .07 | | | 5.98 |
| Willard | Cape Fear | | .90 | | | | | | .35 | .07 | | | | | | | | | | .95 | | .20 | 2.00 | .70 | .50 | 1.00 | 1.20 | | | | | | 6.85 |
| Wilmington *** | ....do | | | | 1.87 | .01 | | | .20 | .08 | | | | .11 | .55 | | | | T. | | | 1.22 | .30 | 1.82 | .95 | .76 | .81 | .24 | | .50 | | | 7.42 |
| *Central District.* | | | | | | | | | | | | | | | | | | | T. | T. | | .39 | 1.00 | 4.07 | .24 | .79 | 1.26 | | .01 | .25 | | | 8.66 |
| Albemarle | Pedee | .03 | .14 | 1.08 | | | | | .18 | .18 | .51 | .15 | | .02 | .44 | 4.70 | .08 | .11 | | | .10 | .21 | .45 | .80 | 1.25 | .05 | | | | .30 | | | 10.83 |
| Caroleen | Santee | | 2.08 | .04 | | 1.30 | | .31 | .43 | 2.00 | .38 | .08 | .63 | | .13 | 8.00 | 2.55 | | .02 | .10 | | .78 | .04 | .01 | .40 | | .06 | .06 | | | | | 10.78 |
| Chapel Hill | Cape Fear | .11 | .16 | | .45 | | | | | .02 | .06 | .18 | | .16 | .17 | .34 | .02 | .18 | | | | .06 | .61 | .30 | 1.82 | .50 | | | .27 | .33 | | | 19.40 |
| Charlotte *** | Santee | | .37 | T. | 1.50 | | | | .20 | 2.57 | .17 | T. | | | .53 | 4.61 | .01 | | T. | | 1.02 | .26 | 1.14 | .82 | 2.83 | .15 | .36 | | .01 | T. | | | 5.74 |
| Durham (near) | Neuse | | .38 | .14 | | | | | | .12 | | .50 | | | .34 | .20 | .08 | .07 | | | | .38 | .16 | 2.48 | .51 | | | | | | | | 16.55 |
| Graham | Cape Fear | .03 | | .58 | | .48 | | | | | .03 | .11 | .05 | T. | | .96 | .08 | .39 | | | | | T. | .60 | .52 | 1.96 | .31 | T. | | T. | | | 5.36 |
| Greensboro | ....do | 1.44 | .29 | .18 | .58 | | | | | .05 | .08 | .95 | .18 | | | .78 | .50 | .15 | | | | .05 | | .90 | .59 | 1.10 | .65 | | | .06 | | | 6.10 |
| Henderson | Tar, Roanoke | | | .76 | | | | | | .25 | | .27 | | | T. | .13 | T. | | | | | T. | 1.55 | .50 | 2.26 | .14 | .05 | T. | .05 | .22 | | | 8.23 |
| Kings Mountain | Santee | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6.18 |
| Lillington | Cape Fear | .20 | | .20 | .12 | | | | | .32 | | .04 | | | | .40 | | | | | | | | | | | | | | | | | |
| Lincolnton | Santee | .42 | .21 | .59 | | | | | .30 | .90 | .40 | .62 | T. | T. | .21 | 10.00 | .95 | .35 | .62 | | .83 | .92 | .31 | 1.50 | .57 | 1.05 | .65 | .13 | | .45 | | | 6.86 |
| Louisburg | Tar | .21 | | | | | | | | .80 | | .46 | | | | | | | | | | .20 | | | .97 | .15 | .70 | | | .05 | | | 18.47 |
| Moncure | Cape Fear | .05 | | .24 | | | | | | .16 | | .05 | | | | .51 | | .10 | | | | | | 2.03 | 1.10 | .46 | | | | .22 | | | 5.39 |
| Monroe | Pedee | .73 | | .50 | | | | | .15 | .41 | .35 | .34 | | | 1.10 | 4.36 | | | | | | .45 | .75 | 1.24 | .31 | 1.03 | .04 | | | .07 | T. | | 5.00 |
| Mount Holly | Santee | .08 | | .60 | | .91 | | | | .58 | 1.42 | .52 | | | | 2.10 | 1.35 | .13 | | | T. | .22 | .36 | .22 | 1.04 | .94 | | .20 | | .10 | | | 12.44 |
| Neuse | Neuse | .21 | .42 | | | | T. | .17 | | .76 | | | .38 | | | .06 | | | | | | .13 | 2.24 | .66 | .52 | 1.06 | .65 | .86 | | .12 | | | 11.45 |
| Pinehurst | Lumber | .02 | 1.84 | | | | | | | | | | | | 2.25 | .22 | | | | | | | .04 | .02 | 1.50 | 1.20 | | .20 | | .12 | | | 7.85 |
| Raleigh *** | Neuse | | .27 | .12 | .01 | | | T. | .08 | .04 | .36 | | | | .70 | .12 | T. | .02 | | | | 1.64 | .61 | T. | 2.52 | 1.54 | | T. | .06 | T. | | | 9.41 |
| Randleman | Cape Fear | | .16 | | | .30 | | | | .10 | .20 | | | | | .25 | .23 | 1.30 | | | | | .45 | 1.20 | 1.74 | | | | | .95 | | | 8.09 |
| Reidsville | ....do | .93 | .42 | | | | | | | .02 | .27 | .20 | .03 | | | .74 | .27 | .17 | .10 | | | | .15 | .06 | .32 | .74 | .67 | | | .44 | | | 6.95 |
| Rockingham | Pedee | 1.30 | | 1.20 | | | | | | .15 | | | | | .18 | 2.60 | .45 | | | | | .10 | 1.25 | .65 | .40 | 1.30 | | .15 | .05 | | .15 | .05 | 5.53 |
| Rougemont | Neuse | .10 | T. | | | | | T. | | .20 | T. | .30 | | | .40 | T. | | | | | | .66 | .60 | .40 | 2.50 | | | T. | | | | 9.98 |
| Salisbury | Pedee | .08 | .07 | .05 | | | | | .30 | .39 | 1.55 | | | | | 2.18 | 1.08 | .10 | | | | .68 | .34 | .11 | .52 | 2.47 | | .99 | | .25 | | | 5.16 |
| Sanatorium | Lumber | | 1.25 | | | | | | .13 | .02 | | | .02 | 2.98 | 1.70 | | | | | .12 | | | .65 | .34 | .91 | 1.84 | | .30 | | .33 | | | 11.16 |
| Settle | Pedee | T. | .92 | | | | | .05 | 2.10 | .67 | .32 | | | .22 | 3.80 | .90 | | T. | | .43 | | .35 | .11 | | .50 | | .43 | | .25 | T. | | | 10.59 |
| Siler City | Cape Fear | .15 | 2.46 | | | | | T. | .04 | .11 | .27 | T. | | .20 | .75 | .07 | .07 | | | | | .56 | 2.36 | .10 | .92 | .03 | T. | .01 | .51 | .30 | .03 | | 11.05 |
| Southern Pines | Lumber | | 2.20 | | | | | | .05 | | T. | | | 2.25 | 1.50 | | T. | | | | .30 | .25 | 2.00 | .20 | 1.00 | 1.60 | .10 | .05 | | .40 | .02 | | | 9.44 |
| Statesville | Pedee | .15 | .40 | .95 | | | | .05 | 1.90 | 1.52 | .72 | .05 | | .12 | 3.52 | 1.33 | .43 | 1.82 | | | | 1.05 | .08 | | .70 | | .79 | | | .08 | | | 11.92 |
| Winston-Salem | ....do | .26 | 1.24 | .04 | | | | | .19 | .23 | .47 | .02 | | | .81 | 2.63 | .31 | .66 | .02 | | .08 | | .44 | .91 | .65 | .04 | .31 | .06 | | .02 | | | 15.46 |
| *Western District.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9.89 |
| Altapass (near) | Santee | .20 | .04 | .08 | T. | | | .30 | 1.15 | 3.30 | 3.50 | .17 | .30 | T. | .46 | 3.90 | 19.32 | .05 | .03 | .50 | .03 | .14 | .15 | T. | .28 | | .55 | .14 | .24 | .57 | T. | | 35.40 |
| Andrews | Tennessee | .28 | | .05 | | | | .30 | 1.00 | .95 | .37 | .07 | .15 | .47 | .07 | .01 | 1.00 | .02 | .05 | .02 | | 2.60 | .10 | .10 | .22 | .26 | .20 | .37 | .15 | | | | 8.81 |
| Asheville *** | ....do | .01 | .21 | T. | .06 | | | .10 | 2.08 | 1.21 | .41 | .05 | .01 | .04 | .25 | 1.50 | 1.10 | .38 | T. | .49 | T. | .08 | .37 | T. | .35 | .07 | .16 | | .34 | .01 | T. | | 9.28 |
| Banners Elk | ....do | .25 | .10 | | .85 | | | | | 2.00 | 2.30 | T. | .38 | | .50 | 7.20 | 8.66 | .77 | T. | .81 | .58 | .92 | | .80 | .02 | | 1.05 | | .84 | | | | 24.06 |
| Blantyre | ....do | .05 | .65 | T. | .40 | | | .30 | 1.65 | 2.35 | 1.30 | .68 | .15 | T. | .25 | 2.85 | 13.25 | .12 | .80 | .28 | .28 | .16 | .20 | T. | .50 | .10 | T. | .33 | .04 | .16 | T. | | 26.25 |
| Blowing Rock | Gr. Kanawha | .20 | .20 | | | | | | .20 | 4.50 | 3.08 | .25 | 1.65 | .18 | .30 | 9.85 | 6.50 | | .35 | .20 | .81 | .05 | .15 | .06 | | | 1.50 | | | .35 | | | 29.78 |
| Brevard | Tennessee | T. | T. | | | .50 | | .27 | 1.78 | 2.45 | 1.30 | .05 | .18 | .30 | * | * | 14.70 | T. | .23 | .97 | .56 | .20 | .50 | | .03 | .36 | .07 | .40 | .22 | | .02 | | 27.06 |
| Brewers | Pedee | .42 | .02 | T. | | | | | .17 | 2.90 | 1.90 | .19 | .45 | .02 | .50 | 6.68 | 3.13 | .42 | .50 | .02 | .12 | .17 | 1.70 | 1.07 | .39 | .20 | .16 | .01 | .01 | T. | | | 21.15 |
| Bryson City | Tennessee | | 1.60 | .27 | | | | | .18 | .92 | .43 | .10 | .02 | .08 | | | | .05 | .20 | .40 | | .02 | .06 | | | | .04 | .30 | | | | .16 | 4.78 |
| Cane River | ....do | 1.46 | .07 | .25 | | | | .10 | .81 | 1.67 | .12 | .07 | .08 | .01 | .18 | 1.73 | 1.57 | .07 | | .07 | .16 | 1.00 | .06 | .05 | .07 | | .04 | .08 | | .58 | .06 | | 10.36 |
| Chimney Rock | Santee | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cullowhee | Tennessee | .23 | | .15 | | | | .22 | .92 | 1.32 | .42 | .02 | .10 | .16 | .01 | .82 | 1.02 | T. | .18 | .02 | .52 | .24 | .75 | .15 | .50 | | .02 | .37 | | .05 | T. | | 8.09 |
| Eagle Nest | ....do | .60 | T. | .36 | T. | | | T. | 1.40 | .76 | .32 | T. | | | .01 | .75 | .65 | T. | T. | .64 | 1.30 | .65 | T. | T. | .45 | T. | .40 | | T. | T. | | | 8.35 |
| Elkin | Pedee | .15 | .08 | .63 | | | | | | .42 | 2.15 | .30 | | | .24 | 1.07 | 1.93 | .31 | .52 | .55 | | .74 | | .27 | .18 | .20 | | T. | T. | .42 | | | 10.16 |
| Ellijay | Tennessee | 1.15 | .02 | | | | | .06 | 1.05 | 1.68 | .85 | .16 | .75 | .02 | .03 | .30 | 1.68 | .01 | .83 | 1.50 | .26 | .68 | .76 | | .45 | 1.03 | | .16 | .15 | .13 | | | 13.71 |
| Globe (near) | Santee | .28 | .84 | | | | | | .97 | 4.90 | 2.54 | .30 | | | .35 | 7.90 | 10.10 | .38 | .38 | .36 | 1.79 | .77 | .47 | .48 | .40 | | .30 | | .86 | | | | 34.37 |
| Gorge (near) | ....do | .04 | .97 | | | | | .06 | 1.26 | 4.65 | 1.89 | .22 | .52 | .10 | .50 | 10.02 | 10.43 | .03 | .45 | 1.28 | .27 | .46 | .68 | .12 | 1.19 | .10 | .02 | .09 | 1.24 | .81 | | | 37.40 |
| Hendersonville | Tennessee | .14 | .01 | T. | | | | .65 | 1.84 | 2.40 | 1.82 | .03 | .23 | .02 | .22 | 2.38 | 9.92 | .02 | .11 | .21 | .41 | .05 | .05 | | .78 | .60 | .42 | .30 | T. | .18 | | | 22.09 |
| Hickory | Santee | .14 | .40 | | | | | | .30 | 1.32 | 1.47 | .30 | .04 | | .19 | 9.88 | 3.30 | .02 | .92 | | .14 | .30 | .13 | | .35 | .03 | | | | .15 | | | 19.38 |
| Highlands | Tennessee | .68 | .03 | | .03 | | | .55 | 4.50 | 7.43 | 3.44 | .80 | .29 | | .05 | .53 | 5.77 | .63 | T. | 2.00 | 1.85 | 1.01 | 1.15 | .04 | .77 | 1.14 | 2.70 | | .10 | | | | 35.49 |
| Hot Springs | ....do | | | 1.30 | .34 | | | | .82 | .54 | .10 | | | | | | .12 | .14 | T. | T. | .10 | .32 | .12 | .41 | | | | | | | | | 5.14 |
| Jefferson | Gr. Kanawha | .17 | .01 | | | | | | .26 | 2.30 | 2.68 | .19 | .31 | | .11 | 7.35 | 4.30 | .08 | T. | T. | .91 | .88 | .10 | .05 | .05 | | 1.00 | T. | .15 | .23 | | | 21.13 |
| Lenoir | Santee | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marion | ....do | .11 | .21 | .26 | | | | .39 | 1.22 | 2.08 | 3.21 | .41 | | | .26 | 7.83 | 3.69 | 1.14 | .43 | .77 | .54 | .26 | .83 | .64 | .44 | .07 | .02 | .04 | .03 | .14 | | | 24.42 |
| Marshall | Tennessee | | | .10 | .10 | | | | .20 | 1.52 | .77 | T. | T. | | | .25 | .69 | 1.55 | | .15 | 1.32 | .11 | | | .14 | | | .21 | | .03 | | | 7.14 |
| Morganton | Santee | .42 | | | | | | .10 | .72 | 1.92 | .68 | .06 | .05 | | .05 | 4.67 | 4.79 | .22 | .28 | | .40 | .05 | .12 | | .25 | .04 | .02 | .11 | .19 | .34 | | | 15.48 |
| Mount Airy | Pedee | | .05 | | | | | | | 1.85 | .61 | .12 | .03 | T. | .03 | 2.95 | .63 | .03 | 1.41 | .02 | .35 | .05 | .39 | .43 | .18 | .17 | .41 | T. | .13 | .01 | | | 9.85 |
| Murphy | Tennessee | | .08 | | | .11 | | T. | 1.09 | 1.49 | 1.26 | .59 | .65 | | .20 | .07 | .07 | .90 | .49 | .06 | .40 | 1.13 | .05 | .23 | .15 | .13 | .37 | .59 | .18 | | T. | | | 16.28 |
| No. Wilkesboro (near) | Pedee | .31 | .12 | 1.10 | | | | | .10 | 1.90 | 2.68 | .06 | | .26 | .25 | 9.08 | 2.38 | | .25 | | .37 | 1.28 | .05 | | .20 | T. | | | T. | .02 | | | 19.76 |
| Rock House | Savannah | .06 | 1.04 | | .10 | | .13 | .84 | 7.08 | 7.34 | 2.50 | .80 | T. | .12 | 1.70 | 5.76 | .68 | .96 | 2.37 | .82 | .17 | .31 | .09 | .72 | .15 | 2.33 | .15 | .03 | .04 | .03 | | | 86.44 |
| Transon | Gr. Kanawha | .58 | 1.00 | 1.00 | | | | | .23 | 3.15 | 4.00 | .11 | T. | T. | 10.65 | 7.40 | | 1.05 | | .48 | .65 | .50 | .50 | .51 | | .83 | | | T. | | | | 32.64 |
| Tryon (near) | Santee | | | | | | | 1.45 | | 5.10 | 2.60 | .80 | .10 | .15 | .17 | 3.16 | 7.06 | .05 | .50 | .68 | .10 | .15 | 1.20 | .36 | | 1.00 | | .02 | | | | | 24.65 |
| Waynesville | Tennessee | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. *** Regular Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight. * Precipitation included in the next following measurement. ‡ Separate dates of falls not recorded. T. Trace, or less than 0.01 inch.

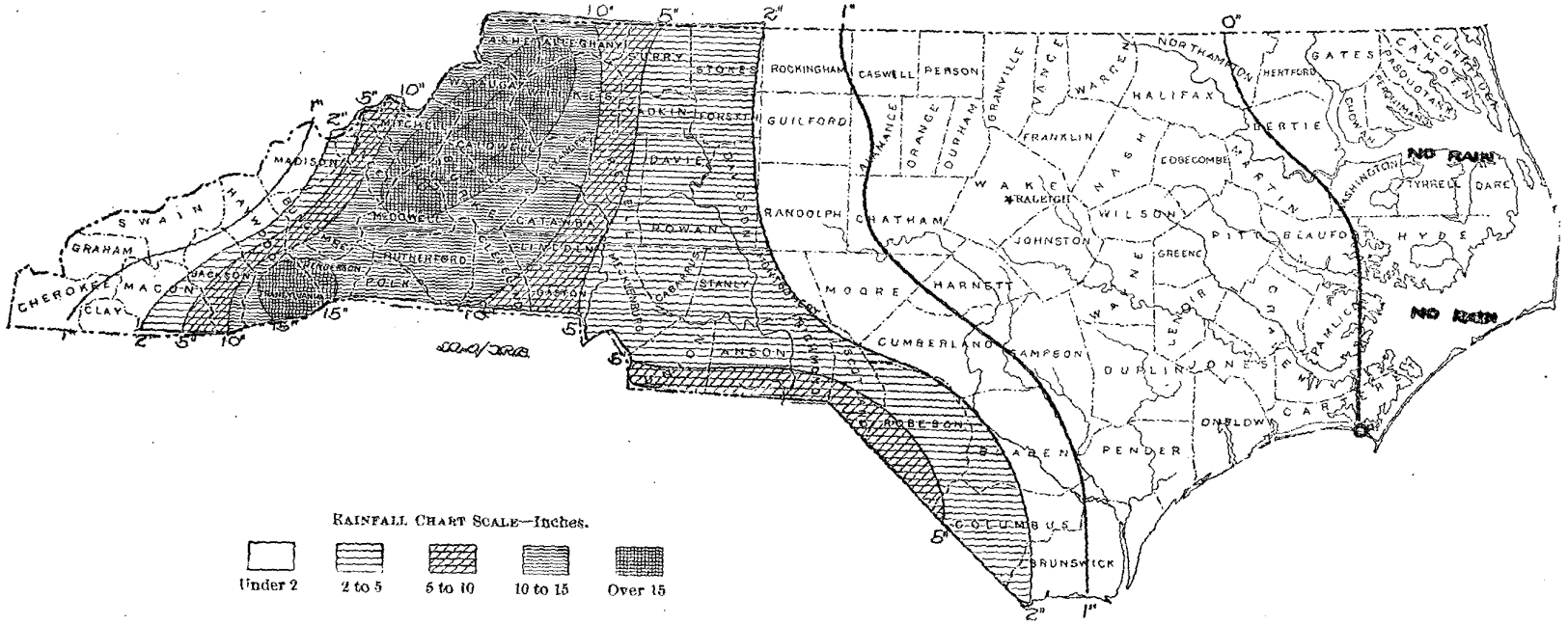
## Daily Temperatures for July, 1916.

| Stations. | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | Mean. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Eastern District.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Beaufort | Maximum | 86 | 88 | 86 | 87 | 85 | 82 | 87 | 85 | 87 | 89 | 89 | 89 | 85 | 84 | 88 | 89 | 89 | 88 | 83 | 91 | 85 | 81 | 79 | 87 | 85 | 86 | 87 | 87 | 85 | 85 | 83 | 86.0 |
| | Minimum | 72 | 72 | 78 | 72 | 72 | 68 | 64 | 75 | 75 | 76 | 77 | 75 | 79 | 79 | 78 | 75 | 75 | 71 | 75 | 72 | 75 | 73 | 72 | 77 | 75 | 77 | 73 | 73 | 75 | 72 | 71 | 74.0 |
| Edenton | Maximum | 83 | 89 | 91 | 86 | 85 | 81 | 88 | 89 | 87 | 90 | 93 | 90 | ..... | | 93 | 92 | 93 | 86 | 84 | 90 | 86 | 86 | 82 | 82 | 80 | 86 | 90 | 90 | 79 | 85 | 83 | [b]86.9 |
| | Minimum | 66 | 63 | 79 | 70 | 62 | 58 | 58 | 74 | 72 | 73 | 74 | 76 | ..... | ..... | 74 | 70 | 73 | 64 | 70 | 73 | 73 | 73 | 73 | 70 | 73 | 75 | 70 | 73 | 70 | 67 | 66 | [b]70.1 |
| Elizabeth City | Maximum | 85 | 89 | 90 | 84 | 84 | 81 | 84 | 88 | 85 | 87 | 93 | 92 | 91 | 90 | 89 | 89 | 91 | 89 | 83 | 87 | 83 | 85 | 85 | 83 | 83 | 86 | 90 | 89 | 80 | 85 | 83 | 86.5 |
| | Minimum | 66 | 62 | 72 | 67 | 61 | 56 | 61 | 57 | 67 | 73 | 72 | 69 | 71 | 74 | 73 | 68 | 68 | 63 | 73 | 71 | 69 | 71 | 70 | 69 | 72 | 73 | 68 | 71 | 68 | 65 | 64 | 67.9 |
| Fayetteville | Maximum | 86 | 86 | 92 | 89 | 85 | 86 | 88 | 87 | 83 | 90 | 93 | 92 | 90 | 80 | 81 | 80 | 89 | 90 | 89 | 92 | 85 | 86 | 83 | 85 | 80 | 83 | 86 | 90 | 83 | 85 | 85 | 86.4 |
| | Minimum | 67 | 69 | 69 | 70 | 65 | 61 | 65 | 64 | 69 | 68 | 73 | 77 | 71 | 69 | 73 | 71 | 71 | 70 | 69 | 71 | 72 | 71 | 69 | 70 | 71 | 70 | 70 | 71 | 71 | 65 | 64 | 69.2 |
| Goldsboro §§ | Maximum | 89 | 90 | 94 | 88 | 88 | 85 | 90 | 90 | 86 | 88 | 92 | 94 | 93 | 81 | 87 | 88 | 90 | 94 | 91 | 93 | 84 | 81 | 86 | 86 | 83 | 84 | 88 | 91 | 86 | 87 | 85 | 87.9 |
| | Minimum | 67 | 68 | 70 | 72 | 64 | 61 | 63 | 65 | 69 | 70 | 74 | 71 | 72 | 75 | 73 | 68 | 72 | 68 | 73 | 68 | 73 | 73 | 72 | 70 | 72 | 72 | 72 | 71 | 71 | 74 | 64 | 69.7 |
| Greenville | Maximum | 85 | 89 | 92 | 87 | 86 | 84 | 90 | 90 | 85 | 88 | 93 | 94 | 90 | 87 | 87 | 88 | 93 | 98 | 89 | 72 | 85 | 85 | 86 | 84 | 84 | 87 | 92 | 90 | 78 | 89 | 84 | 88.1 |
| | Minimum | 66 | 65 | 68 | 69 | 62 | 58 | 59 | 64 | 67 | 72 | 73 | 68 | 70 | 74 | 74 | 67 | 70 | 67 | 73 | 69 | 72 | 71 | 71 | 71 | 71 | 71 | 69 | 71 | 72 | 65 | 66 | 68.5 |
| Hatteras | Maximum | 81 | 84 | 84 | 83 | 84 | 75 | 83 | 81 | 82 | 83 | 84 | 84 | 85 | 85 | 85 | 84 | 84 | 83 | 86 | 86 | 82 | 80 | 78 | 81 | 83 | 83 | 84 | 85 | 79 | 81 | 79 | 82.4 |
| | Minimum | 73 | 72 | 70 | 70 | 68 | 64 | 63 | 72 | 73 | 76 | 75 | 74 | 78 | 78 | 76 | 74 | 74 | 76 | 74 | 73 | 75 | 71 | 72 | 74 | 75 | 74 | 75 | 76 | 74 | 73 | 72 | 73.0 |
| Lumberton §§ | Maximum | 90 | 92 | 92 | 92 | 90 | 89 | 88 | 89 | 86 | 89 | 96 | 95 | 88 | 77 | 81 | 85 | 91 | 92 | 91 | 93 | 88 | 85 | 79 | 88 | 85 | 85 | 89 | 93 | 88 | 98 | 86 | 88.7 |
| | Minimum | 67 | 68 | 69 | 72 | 67 | 61 | 64 | 64 | 66 | 68 | 71 | 71 | 73 | 73 | 72 | 71 | 71 | 69 | 72 | 70 | 70 | 72 | 70 | 71 | 71 | 72 | 70 | 71 | 70 | 67 | 67 | 69.4 |
| Manteo | Maximum | 79 | 84 | 89 | 81 | 81 | 74 | 84 | 83 | 82 | 87 | 83 | 85 | 86 | 84 | 87 | 83 | 83 | 84 | 78 | 86 | 82 | 76 | 79 | 81 | 84 | 81 | 84 | 79 | 78 | 81 | 80 | 82.2 |
| | Minimum | 71 | 70 | 74 | 70 | 63 | 62 | 55 | 68 | 70 | 73 | 70 | 71 | 71 | 74 | 73 | 65 | 68 | 63 | 72 | 72 | 70 | 68 | 71 | 70 | 72 | 71 | 72 | 71 | 68 | 63 | 63 | 68.8 |
| Newbern §§ | Maximum | 89 | 88 | 93 | 88 | 87 | 82 | 88 | 89 | 86 | 87 | 88 | 92 | 90 | 84 | 90 | 91 | 94 | 88 | 83 | 92 | 85 | 82 | 79 | 84 | 84 | 84 | 91 | 92 | 88 | 88 | 83 | 87.2 |
| | Minimum | 69 | 69 | 74 | 71 | 68 | 62 | 61 | 67 | 67 | 74 | 74 | 70 | 75 | 76 | 76 | 71 | 68 | 68 | 70 | 70 | 73 | 73 | 71 | 73 | 72 | 74 | 69 | 72 | 72 | 69 | 67 | 70.5 |
| Sloan | Maximum | 87 | 87 | 91 | 89 | 87 | 84 | 87 | 86 | 84 | 87 | 88 | 91 | 89 | 80 | 84 | 87 | 89 | 89 | 88 | 94 | 83 | 81 | 78 | 80 | 79 | 83 | 97 | 91 | 85 | 87 | 81 | 86.2 |
| | Minimum | 65 | 66 | 70 | 71 | 65 | 58 | 61 | 62 | 69 | 71 | 74 | 66 | 70 | 71 | 75 | 65 | 66 | 65 | 74 | 67 | 71 | 70 | 73 | 71 | 73 | 71 | 68 | 69 | 73 | 66 | 68 | 68.5 |
| Southport | Maximum | 87 | 86 | 85 | 86 | 88 | 83 | 85 | 85 | 83 | 85 | 88 | 88 | 84 | 80 | 87 | 86 | 89 | 88 | 91 | 88 | 85 | 81 | 79 | 85 | 82 | 80 | 88 | 87 | 91 | 87 | 83 | 85.1 |
| | Minimum | 68 | 70 | 77 | 73 | 71 | 69 | 68 | 71 | 76 | 76 | 78 | 73 | 78 | 75 | 76 | 73 | 71 | 71 | 74 | 71 | 78 | 74 | 71 | 75 | 75 | 74 | 73 | 75 | 73 | 69 | 71 | 73.1 |
| Swan Quarter | Maximum | 82 | 85 | 88 | 86 | 84 | 79 | 84 | 83 | 82 | 86 | 88 | 89 | 88 | 87 | 89 | 90 | 90 | 87 | 82 | 89 | 86 | 81 | 77 | 84 | 84 | 84 | 85 | 88 | 79 | 84 | 80 | 84.8 |
| | Minimum | 69 | 67 | 75 | 65 | 66 | 64 | 55 | 64 | 65 | 74 | 75 | 69 | 75 | 77 | 78 | 69 | 68 | 66 | 74 | 73 | 72 | 72 | 72 | 72 | 72 | 73 | 70 | 74 | 71 | 66 | 68 | 70.0 |
| Tarboro §§ | Maximum | 88 | 87 | 93 | 86 | 87 | 86 | 91 | 90 | 85 | 89 | 94 | 96 | 96 | 90 | 90 | 91 | 94 | 96 | 91 | 94 | 87 | 84 | 87 | 86 | 83 | 88 | 91 | 90 | 82 | 87 | 84 | 89.1 |
| | Minimum | 67 | 66 | 70 | 70 | 63 | 58 | 60 | 65 | 69 | 70 | 74 | 71 | 71 | 75 | 73 | 68 | 72 | 69 | 74 | 71 | 73 | 72 | 71 | 72 | 73 | 72 | 72 | 72 | 72 | 71 | 72 | 69.5 |
| Weldon §§ | Maximum | 86 | 87 | 91 | 85 | 85 | 84 | 89 | 90 | 88 | 84 | 91 | 91 | 93 | 92 | 91 | 89 | 90 | 92 | 92 | 93 | 89 | 93 | 86 | 81 | 81 | 87 | 90 | 89 | 82 | 84 | 88 | 88.2 |
| | Minimum | 67 | 67 | 71 | 68 | 64 | 59 | 61 | 65 | 69 | 66 | 71 | 71 | 70 | 73 | 73 | 69 | 72 | 71 | 73 | 70 | 73 | 74 | 70 | 71 | 72 | 71 | 71 | 71 | 69 | 62 | 63 | 68.9 |
| Wenona | Maximum | 83 | 80 | 89 | 85 | 87 | 82 | 86 | 87 | 83 | 86 | 88 | 90 | 90 | 91 | 92 | 94 | 92 | 89 | 89 | 89 | 84 | 85 | 81 | 80 | 81 | 85 | 89 | 88 | 90 | 85 | 83 | 86.3 |
| | Minimum | 65 | 63 | 61 | 60 | 59 | 55 | 51 | 61 | 71 | 70 | 65 | 68 | 69 | 67 | 66 | 65 | 63 | 61 | 57 | 73 | 72 | 75 | 72 | 67 | 76 | 72 | 62 | 70 | 71 | 66 | 65 | 65.4 |
| Wilmington | Maximum | 85 | 85 | 90 | 88 | 85 | 82 | 81 | 83 | 83 | 85 | 88 | 85 | 83 | 79 | 83 | 86 | 87 | 87 | 88 | 92 | 85 | 79 | 81 | 83 | 81 | 79 | 85 | 87 | 84 | 85 | 82 | 84.4 |
| | Minimum | 68 | 70 | 76 | 67 | 71 | 66 | 66 | 69 | 71 | 76 | 77 | 73 | 75 | 72 | 75 | 72 | 72 | 70 | 74 | 72 | 75 | 73 | 71 | 73 | 73 | 70 | 74 | 74 | 72 | 67 | 72 | 71.8 |
| *Central District.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Albemarle | Maximum | 88 | 88 | 92 | 88 | 88 | 88 | 86 | 82 | 80 | 86 | 90 | 92 | 91 | 83 | 76 | 81 | 86 | 91 | 90 | 87 | 84 | 84 | 89 | 82 | 85 | 87 | 90 | 92 | 81 | 89 | 89 | 86.6 |
| | Minimum | 66 | 69 | 66 | 66 | 64 | 57 | 62 | 61 | 68 | 70 | 66 | 67 | 67 | 72 | 71 | 71 | 70 | 68 | 65 | 66 | 70 | 70 | 69 | 69 | 70 | 68 | 66 | 68 | 71 | 64 | 63 | 67.1 |
| Caroleen | Maximum | 90 | 91 | 90 | 90 | 87 | 86 | 81 | 79 | 78 | 81 | 86 | 86 | 87 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | Minimum | 67 | 67 | 66 | 68 | 66 | 66 | 68 | 67 | 66 | 67 | 66 | 67 | 69 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Chapel Hill | Maximum | 82 | 88 | 88 | 82 | 82 | 80 | 86 | 84 | 81 | 83 | 82 | 88 | 86 | 81 | 77 | 79 | 85 | 86 | 85 | 88 | 83 | 82 | 83 | 80 | 79 | 83 | 86 | 84 | 77 | 81 | 85 | 83.1 |
| | Minimum | 68 | 68 | 67 | 69 | 63 | 61 | 63 | 65 | 69 | 70 | 71 | 70 | 76 | 72 | 72 | 71 | 71 | 71 | 71 | 73 | 73 | 69 | 70 | 71 | 70 | 69 | 71 | 69 | 64 | 65 | 65 | 69.1 |
| Charlotte | Maximum | 86 | 89 | 88 | 87 | 85 | 85 | 82 | 76 | 77 | 85 | 86 | 87 | 87 | 80 | 76 | 79 | 85 | 86 | 86 | 88 | 84 | 81 | 83 | 75 | 83 | 86 | 85 | 89 | 73 | 85 | 89 | 83.6 |
| | Minimum | 67 | 66 | 67 | 68 | 66 | 68 | 67 | 64 | 71 | 69 | 70 | 71 | 67 | 69 | 70 | 71 | 67 | 69 | 70 | 71 | 71 | 69 | 70 | 72 | 70 | 67 | 64 | 70 | 66 | 67 | 71 | 69 | 70 | 68.5 |
| Greensboro §§ | Maximum | 84 | 86 | 93 | 84 | 86 | 86 | 89 | 85 | 80 | 85 | 89 | 90 | 90 | 82 | 74 | 82 | 86 | 89 | 88 | 88 | 89 | 88 | 87 | 75 | 84 | 89 | 89 | 90 | 74 | 87 | 91 | 85.8 |
| | Minimum | 66 | 69 | 67 | 67 | 63 | 59 | 63 | 63 | 68 | 70 | 66 | 68 | 68 | 71 | 72 | 70 | 71 | 71 | 69 | 69 | 70 | 72 | 69 | 70 | 70 | 70 | 66 | 68 | 68 | 63 | 66 | 67.8 |
| Henderson | Maximum | 86 | 89 | 91 | 85 | 88 | 85 | 87 | 88 | 88 | 87 | 82 | 93 | 92 | 87 | 86 | 79 | 90 | 90 | 94 | 91 | 88 | 85 | 78 | 80 | 86 | 91 | 87 | 78 | 85 | 86 | 86 | 86.7 |
| | Minimum | 68 | 68 | 69 | 71 | 65 | 62 | 65 | 68 | 70 | 70 | 73 | 71 | 73 | 73 | 73 | 71 | 72 | 73 | 73 | 67 | 74 | 68 | 69 | 71 | 71 | 71 | 70 | 71 | 68 | 63 | 66 | 69.3 |
| Louisburg | Maximum | 84 | 84 | 90 | 84 | 86 | 84 | 86 | 87 | 84 | 90 | 89 | 91 | 85 | 81 | 79 | 81 | 96 | 90 | 92 | 86 | 88 | 88 | 85 | 81 | 82 | 88 | 83 | 81 | 87 | 85 | 87 | 85.8 |
| | Minimum | 66 | 66 | 69 | 70 | 61 | 60 | 62 | 66 | 69 | 70 | 71 | 70 | 71 | 74 | 78 | 68 | 71 | 71 | 72 | 69 | 73 | 72 | 69 | 70 | 71 | 71 | 72 | 70 | 74 | 61 | 60 | 68.9 |
| Monroe | Maximum | 87 | 90 | 89 | 88 | 88 | 86 | 79 | 81 | 87 | 88 | 91 | 90 | 80 | 79 | 81 | 86 | 89 | 89 | 88 | 85 | 84 | 86 | 82 | 85 | 84 | 86 | 82 | 86 | 88 | 90 | 82 | 86.1 |
| | Minimum | 65 | 70 | 67 | 69 | 67 | 58 | 65 | 62 | 68 | 68 | 65 | 69 | 67 | 70 | 70 | 71 | 71 | 71 | 65 | 65 | 70 | 72 | 70 | 70 | 71 | 71 | 65 | 68 | 72 | 69 | 65 | 68.0 |
| Pinehurst | Maximum | 89 | 85 | 93 | 91 | 89 | 89 | 89 | 85 | 87 | 89 | 94 | 94 | 93 | 86 | 83 | 82 | 89 | 92 | 92 | 92 | 86 | .... | 92 | 84 | 82 | 83 | 88 | 91 | 88 | 88 | 89 | [a]88.5 |
| | Minimum | 68 | 67 | 67 | 66 | 65 | 59 | 66 | 65 | 65 | 65 | 74 | 73 | 71 | 71 | 72 | 72 | 71 | 71 | 69 | 69 | 73 | .... | 73 | 73 | 71 | 70 | 71 | 70 | 71 | 72 | 71 | [a]69.4 |
| **Raleigh** | Maximum | 85 | 83 | 88 | 85 | 85 | 84 | 86 | 86 | 81 | 84 | 88 | 90 | 89 | 82 | 80 | 77 | 87 | 88 | 90 | 82 | 82 | 87 | 80 | 79 | 81 | 85 | 86 | 76 | 85 | 86 | 84.4 |
| | Minimum | 68 | 69 | 69 | 72 | 66 | 65 | 66 | 67 | 69 | 71 | 72 | 73 | 73 | 71 | 71 | 70 | 72 | 71 | 73 | 71 | 70 | 71 | 71 | 67 | 69 | 71 | 71 | 72 | 68 | 64 | 67 | 69.7 |
| Reidsville | Maximum | 81 | 86 | 91 | 82 | 84 | 85 | 89 | 87 | 79 | 84 | 88 | 88 | 89 | 85 | 75 | 82 | 86 | 87 | 86 | 89 | 87 | 89 | 83 | 89 | 88 | 87 | 89 | 90 | 77 | 90 | 85.7 |
| | Minimum | 70 | 68 | 67 | 69 | 62 | 58 | 63 | 63 | 67 | 69 | 65 | 67 | 68 | 69 | 71 | 70 | 71 | 70 | 68 | 69 | 69 | 71 | 67 | 71 | 69 | 68 | 66 | 70 | 67 | 67 | 67 | 67.6 |
| Salisbury | Maximum | 88 | 86 | 93 | 88 | 87 | 90 | 89 | 80 | 82 | 82 | 90 | 92 | 91 | 83 | 83 | 79 | 85 | 89 | 88 | 86 | 86 | 85 | 84 | 76 | 86 | 89 | 87 | 91 | 76 | 87 | 91 | 86.1 |
| | Minimum | 65 | 71 | 68 | 70 | 65 | 61 | 68 | 66 | 69 | 68 | 67 | 70 | 70 | 73 | 64 | 71 | 72 | 72 | 67 | 70 | 70 | 70 | 69 | 70 | 70 | 67 | 65 | 69 | 68 | 69 | 68 | 68.2 |
| Sanatorium | Maximum | 86 | 84 | 90 | 88 | 88 | 89 | 88 | 84 | 84 | 86 | 92 | 91 | 90 | 83 | 80 | 83 | 86 | 88 | 88 | 89 | 89 | 82 | 84 | 84 | 89 | 81 | 87 | 89 | 84 | 85 | 85 | 86.3 |
| | Minimum | 64 | 64 | 66 | 69 | 65 | 60 | 65 | 73 | 72 | 69 | 72 | 70 | 72 | 70 | 70 | 70 | 70 | 69 | 69 | 71 | 68 | 71 | 67 | 68 | 68 | 69 | 68 | 67 | 69 | 63 | 65 | 68.5 |
| Siler City | Maximum | ..... | ..... | 84 | 85 | 83 | 85 | 86 | 83 | 83 | 86 | 90 | 91 | 90 | 83 | 77 | 83 | 87 | 88 | 88 | 90 | 84 | 86 | 83 | 82 | 85 | 86 | 89 | 91 | 75 | 85 | 89 | [b]85.6 |
| | Minimum | ..... | ..... | 72 | 65 | 62 | 58 | 62 | 65 | 61 | 71 | 69 | 71 | 68 | 72 | 72 | 71 | 70 | 69 | 69 | 71 | 71 | 69 | 70 | 71 | 70 | 66 | 69 | 69 | 61 | 63 | [b]67.8 |
| Statesville | Maximum | 85 | 87 | 92 | 90 | 88 | 87 | 84 | 78 | 77 | 84 | 86 | 86 | 89 | 81 | 74 | 79 | 86 | 84 | 89 | 86 | 88 | 88 | 86 | 81 | 86 | 89 | 86 | 91 | 87 | 88 | 92 | 85.6 |
| | Minimum | 70 | 64 | 63 | 64 | 60 | 77 | 76 | 71 | 70 | 66 | 68 | 67 | 74 | 72 | 69 | 70 | 71 | 70 | 74 | 70 | 72 | 71 | 69 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | [b]69.5 |
| Winston-Salem §§ | Maximum | 89 | 87 | 85 | 84 | 86 | 87 | 86 | 79 | 79 | 84 | 86 | 89 | 89 | 83 | 75 | 73 | 84 | 86 | 84 | 85 | 76 | 86 | 86 | 87 | 88 | 86 | 91 | 94 | 89 | 90 | 84.8 |
| | Minimum | 69 | 68 | 67 | 63 | 61 | 58 | 64 | 62 | 68 | 70 | 66 | 68 | 68 | 71 | 72 | 70 | 71 | 69 | 67 | 68 | 71 | 73 | 69 | 71 | 71 | 69 | 66 | 69 | 68 | 62 | 68 | 67.6 |
| *Western District.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Andrews | Maximum | 89 | 89 | 88 | 87 | 88 | 83 | 77 | 71 | 75 | 79 | 83 | 85 | 85 | 88 | 88 | 82 | 90 | 89 | 85 | 85 | 86 | 87 | 88 | 86 | 87 | 89 | 84 | 87 | 87 | 86 | 89 | 85.2 |
| | Minimum | 61 | 61 | 60 | 61 | 58 | 63 | 65 | 64 | 67 | 66 | 66 | 63 | 62 | 61 | 65 | 70 | 66 | 65 | 62 | 67 | 66 | 66 | 62 | 62 | 66 | 66 | 66 | 61 | 66 | 64 | 69 | 63.6 |
| Asheville | Maximum | 84 | 84 | 82 | 82 | 80 | 79 | 74 | 66 | 70 | 73 | 79 | 82 | 81 | 79 | 72 | 75 | 82 | 81 | 80 | 80 | 80 | 82 | 82 | 80 | 83 | 82 | 83 | 82 | 75 | 83 | 83 | 79.4 |
| | Minimum | 64 | 63 | 63 | 64 | 61 | 66 | 65 | 63 | 64 | 66 | 66 | 67 | 64 | 64 | 65 | 69 | 68 | 66 | 65 | 66 | 67 | 67 | 66 | 63 | 64 | 61 | 62 | 64 | 68 | 65 | 67 | 64.9 |
| Banners Elk | Maximum | 76 | 74 | 78 | 78 | 75 | 80 | 75 | 70 | 70 | 70 | 76 | 79 | 80 | 76 | 72 | 69 | 74 | 72 | 74 | 78 | 72 | 76 | 77 | 74 | 78 | 80 | 79 | 83 | 79 | 81 | 78 | 75.8 |
| | Minimum | 58 | 50 | 52 | 58 | 48 | 52 | 50 | 56 | 60 | 58 | 62 | 61 | 60 | 61 | 62 | 63 | 64 | 62 | 60 | 58 | 62 | 64 | 57 | 58 | 55 | 55 | 55 | 57 | 64 | 58 | 58 | 58.0 |
| Brewers | Maximum | 77 | 87 | 88 | 87 | 86 | 85 | 89 | 70 | 71 | 81 | 86 | 86 | 81 | 82 | 75 | 74 | 87 | 84 | 86 | 82 | 84 | 84 | 86 | 83 | 85 | 85 | 86 | 83 | 81 | 86 | 90 | 83.1 |
| | Minimum | 62 | 67 | 62 | 63 | 59 | 53 | 51 | 55 | 63 | 62 | 67 | 67 | 64 | 66 | 69 | 66 | 70 | 69 | 66 | 66 | 67 | 68 | 66 | 64 | 68 | 65 | 62 | 75 | 69 | 65 | 63 | 64.5 |
| Cullowhee | Maximum | 88 | 87 | 89 | 87 | 84 | 81 | 74 | 68 | 71 | 79 | 81 | 85 | 86 | 82 | 83 | 80 | 84 | 84 | 83 | 85 | 85 | 85 | 86 | 86 | 85 | 82 | 88 | 85 | 89 | 88 | 83 | 83.3 |
| | Minimum | 62 | 60 | 64 | 61 | 59 | 58 | 65 | 63 | 65 | 65 | 66 | 63 | 63 | 65 | 65 | 69 | 69 | 65 | 69 | 66 | 67 | 69 | 66 | 63 | 64 | 62 | 60 | 65 | 67 | 66 | 66 | 64.4 |
| Hendersonville | Maximum | 82 | 83 | 85 | 83 | 81 | 80 | 75 | 67 | 71 | 75 | 80 | 84 | 83 | 78 | 76 | 74 | 84 | 81 | 84 | 78 | 81 | 84 | 78 | 81 | 84 | 82 | 82 | 84 | 83 | 81 | 85 | 80.3 |
| | Minimum | 61 | 63 | 62 | 63 | 61 | 58 | 61 | 62 | 63 | 63 | 64 | 62 | 63 | 63 | 65 | 67 | 64 | 66 | 63 | 64 | 66 | 66 | 66 | 62 | 63 | 61 | 61 | 63 | 67 | 65 | 65 | 63.3 |
| Hickory | Maximum | 78 | 85 | 87 | 86 | 85 | 85 | 83 | 72 | 75 | 81 | 83 | 87 | 87 | 81 | 72 | 77 | 85 | 79 | 82 | 83 | 85 | 85 | 84 | 82 | 85 | 89 | 83 | 90 | 74 | 83 | 89 | 82.6 |
| | Minimum | 65 | 66 | 65 | 66 | 63 | 63 | 64 | 62 | 65 | 66 | 64 | 72 | 66 | 68 | 68 | 67 | 69 | 70 | 68 | 67 | 69 | 70 | 67 | 66 | 64 | 66 | 63 | 66 | 68 | 67 | 66 | 66.3 |
| Highlands | Maximum | 78 | 77 | 77 | 78 | 77 | 70 | 66 | 62 | 63 | 68 | 68 | 76 | 76 | 76 | 76 | 68 | 78 | 77 | 75 | 75 | 78 | 78 | 77 | 75 | 76 | 78 | 74 | 79 | 75 | 75 | 80 | 74.4 |
| | Minimum | 57 | 62 | 57 | 57 | 56 | 59 | 58 | 56 | 53 | 59 | 59 | 59 | 61 | 59 | 62 | 65 | 62 | 58 | 57 | 60 | 57 | 60 | 54 | 56 | 56 | 55 | 53 | 57 | 63 | 63 | 57 | 58.5 |
| Hot Springs | Maximum | 92 | 89 | 88 | 88 | 87 | 88 | 86 | 79 | 75 | 83 | 85 | 88 | 89 | 86 | 87 | 85 | 85 | 91 | 87 | 88 | 84 | 86 | 84 | 86 | 88 | 83 | 84 | 89 | 89 | 91 | 88 | 86.4 |
| | Minimum | 68 | 64 | 66 | 67 | 66 | 69 | 62 | 64 | 66 | 66 | 70 | 66 | 66 | 67 | 65 | 69 | 69 | 67 | 67 | 69 | 69 | 68 | 68 | 65 | 64 | 62 | 64 | 65 | 62 | 67 | 67 | 66.1 |
| Jefferson | Maximum | 80 | 81 | 80 | 80 | 80 | 79 | 79 | 68 | 65 | 69 | 76 | 79 | 79 | 75 | 70 | 72 | 81 | 78 | 78 | 76 | 81 | 78 | 79 | 76 | 80 | 82 | 83 | 85 | 78 | 82 | 81 | 77.6 |
| | Minimum | 59 | 61 | 61 | 64 | 52 | 50 | 55 | 52 | 59 | 59 | 63 | 63 | 59 | 63 | 63 | 62 | 61 | 65 | 63 | 63 | 62 | 64 | 59 | 60 | 63 | 59 | 58 | 59 | 63 | 63 | 60 | 60.2 |
| Lenoir | Maximum | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | Minimum | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Marion | Maximum | 80 | 85 | 87 | 86 | 83 | 82 | 81 | 70 | 75 | 74 | 82 | 85 | 75 | 77 | 71 | 79 | 87 | 82 | 85 | 82 | 84 | 94 | 85 | 82 | 85 | 86 | 87 | 89 | 75 | 84 | 89 | 81.9 |
| | Minimum | 66 | 64 | 64 | 66 | 65 | 64 | 63 | 66 | 65 | 66 | 67 | 66 | 67 | 65 | 68 | 70 | 69 | 66 | 69 | 66 | 68 | 68 | 65 | 64 | 64 | 62 | 66 | 64 | 67 | 66 | 65 | 65.9 |
| Mount Airy | Maximum | 85 | 87 | 89 | 85 | 88 | 87 | 87 | 79 | 77 | 84 | 80 | 87 | 89 | 85 | 74 | 78 | 85 | 87 | 84 | 86 | 88 | 89 | 88 | 80 | 85 | 87 | 86 | 90 | 83 | 87 | 90 | 85.1 |
| | Minimum | 65 | 67 | 63 | 64 | 58 | 52 | 60 | 57 | 65 | 64 | 67 | 66 | 65 | 68 | 70 | 68 | 70 | 69 | 65 | 68 | 68 | 69 | 65 | 66 | 69 | 68 | 65 | 65 | 68 | 61 | 64 | 65.1 |
| Waynesville | Maximum | ..... | ..... | ..... | ..... | ..... | ..... | 80 | 80 | 79 | 80 | 79 | 80 | 81 | 80 | 81 | 80 | 81 | 82 | 79 | 80 | 81 | 79 | 82 | 80 | 79 | 80 | 81 | 77 | 80 | 81 | 80 | [f]80.0 |
| | Minimum | ..... | ..... | ..... | ..... | ..... | ..... | 65 | 66 | 64 | 66 | 65 | 64 | 65 | 66 | 65 | 66 | 66 | 65 | 66 | 66 | 64 | 66 | 66 | 66 | 65 | 66 | 65 | 66 | 66 | 65 | 66 | [f]65.4 |

Reference letters, (a, b, c), appearing in the table indicate number of days missing: For example, [b] represents two days missing, etc.

§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

RAINFALL WITHIN 48 HOURS, JULY 15–16, 1916.



## EXTRAORDINARY RAINFALL OF JULY, 1916, IN WESTERN NORTH CAROLINA.

The great rainfall over the western and southern portions of North Carolina during July and particularly the downpour in the Blue Ridge Mountains on the 15th–16th far exceeds previous records for this section. In some respects it was the most extraordinary rainfall of which there is any authentic record in this country. All streams from the upper Yadkin to the French Broad were decidely above their previous high water marks and no such destructive flood damage has ever been experienced before in this section.

This was due to a period of daily local rains, augmented by a heavy general rainfall attending a storm which advanced slowly northeastward from the Gulf and remained nearly stationary over the mountain region from the 8th to 10th, followed on the 15th and 16th by an excessive downpour in connection with a hurricane from the south Atlantic coast which moved northwestward across South Carolina over the mountains. The course taken by this hurricane was very unusual. Tropical storms generally recurve to the northeast upon reaching higher latitudes, but this disturbance was prevented from taking this course by the high pressure area overlying the northeastern states and so practically exhausted itself against the mountains. This resulted in an enormous rainfall of 10 to 23 inches from the eastern foothills to the crest of the Blue Ridge (see chart page 56) on July 15th–16th, much the greater part of which occurred within 24 hours. More than fifteen inches fell in the upper portions of the French Broad, Yadkin and New river watersheds and over twenty inches in the upper Catawba in Caldwell, Burke and McDowell counties. The Blue Ridge range reaches from northeast to southwest across the State with numerous spurs extending southeastward. The center of this storm appears to have moved up the Catawba Valley and it was within and at the head of the ravines that the heaviest precipitation was measured. The greatest amount recorded on the 15th and 16th was 23.22 inches near Altapass in a gap of the Blue Ridge on the border between McDowell and Mitchell counties. At this station 22.22 inches fell between 2 p.m. of the 15th and 2 p.m. of the 16th. The greatest previous 24-hour fall as far as is known for the United States is 21.40 inches at Alexandria, Louisiana, on June 15–16, 1886.

The mountains have a deep, fertile soil and are noted for their extensive forests and undergrowth. The soil was thoroughly soaked prior to July 15th, hence the run-off was enormous and the overflow of streams far exceeded previous records. A number of small landslides occurred, resulting in the death of several persons; heretofore landslides have been practically unknown in this region. Crops were seriously damaged and practically wiped out in the bottom lands; many bridges and mills washed away; railroad lines were seriously damaged and some portions of the roads will not be restored to normal conditions for several months. Most of the bridges on the main lines withstood the floods, but traffic was interrupted for several weeks on all mountain roads except the line from Asheville to Murphy which is on the western side of the main range of the Blue Ridge and was not within the area of heavy rainfall.

Estimates by the State Department of Agriculture of the extent of damage in the counties calling for relief measures coincide closely with the area covered by the rainfall of 10 inches or over in 48 hours as recorded at the Weather Bureau stations, and the most widespread damage occurred in the region of greatest rainfall. These are divided into three classes, A, B, C.

Class A (most serious damage)—Counties of Caldwell, Burke, McDowell, Wilkes, Rutherford, Polk and Transylvania; B, Counties of Henderson, Catawba and Mitchell; C, Counties of Buncombe, Alexander, Yadkin, Surry, Alleghany and Ashe. It will be noted that practically no damage occurred west of the French Broad watershed.

Instances are cited to show the remarkable rise of the rivers: At Asheville the French Broad River reached a stage of 18.6 feet at 9 a.m. of the 16th, or 8.0 feet above the previous high record; by 10 a.m. the bridge to which the river gage was attached was swept away and the water continued to rise until 1 p.m., reaching an estimated stage of 21.0 feet, or 10.4 feet above the record flood. The Catawba River at Mount Holly reached a stage of 45.5 feet on the morning of the 17th, or nearly double the 1901 record, the bridge to which the gage was attached being also washed away. The upper waters of the Yadkin were the highest ever observed but the railroad bridge at Clemmons withstood the flood; in the lower watershed of the Yadkin the rainfall was decidedly less and higher stages have been observed, though the river was in flood through the longest period of record. The Roanoke, Cape Fear and other eastern rivers were not affected at this time, but slight overflows occurred toward the close of the month.

The total monthly rainfall is shown on chart, page 57. The greatest amount was 37.40 inches at Gorge, Caldwell County, next in order being Rock House, Macon County, 36, Highlands and Altapas 35, Globe 34, Transon 33 and Blowing Rock 30 inches. All of these stations are in the Blue Ridge range. The greatest previous record for any month was 30.74 inches at Highlands in August, 1901. The greatest record of monthly precipitation for the United States is 71.54 inches at Helen Mine, California, January, 1909.

The following is the record of greatest monthly rainfall at selected stations compared with the total precipitation in July, 1916.

| STATION. | Amount July, 1916. | Greatest Previous Record. | Month and Year. |
|---|---|---|---|
| Brewers | 21.15 | 15.29 | August, 1901. |
| Bryson City | 4.78 | 13.26 | August, 1901. |
| Caroleen | 19.40 | 14.20 | August, 1901. |
| Charlotte | 16.55 | 14.61 | August, 1908. |
| Hendersonville | 22.09 | 26.58 | August, 1901. |
| Highlands | 35.49 | 30.74 | August, 1901. |
| Jefferson | 21.13 | 12.93 | August, 1905. |
| Marshall | 7.14 | 14.42 | August, 1901. |
| Marion | 24.42 | 21.83 | August, 1501. |
| Morganton | 15.48 | 14.70 | August, 1901. |
| Mount Airy | 9.85 | 16.59 | August, 1501. |
| Mount Holly | 11.45 | 16.37 | August, 1908. |
| Salisbury | 11.16 | 16.14 | August, 1887. |
| Rock House | 36.44 | 26.43 | August, 1901. |

TOTAL RAINFALL FOR JULY, 1916.